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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,876	07/14/2003	George J. Miao		6830

7590 09/21/2005
George J. Miao
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Marlboro, NJ 07746

EXAMINER WARE, CICELY Q	
ART UNIT 2634	PAPER NUMBER

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/618,876	MIAO, GEORGE J.	
	Examiner	Art Unit	
	Cicely Ware	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 is/are allowed.
- 6) ☒ Claim(s) 10-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. Applicant has submitted two IDS's. Examiner has only received one. Examiner suggests applicant re-submit the IDS filed on 10/09/2003 with receipt from the Patent Office in order for this IDS to be considered.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The disclosure is objected to because of the following informalities:
 - a. Pg. 6, line 8, applicant uses "Msps". Examiner assumes "Mbps".
 - b. Pg. 6, line 19, applicant uses "dual-dome". Examiner assumes "dual-mode".
 - c. Pg. 6, lines 23-24, examiner suggests applicant re-write these lines for clarification purposes.

d. PG. 9, line 18, applicant makes reference to Fig. 1 wherein "signals from an antenna 112 or to an antenna 110". Fig. 1 however shows "signals from antenna 110 or signals to antenna 112". Examiner suggests applicant correct the disclosure to show what is referenced in the drawings and vice versa for clarification purposes.

Appropriate correction is required.

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claims 1-23 are objected to because of the following informalities:

a. Claim 1-23 disclose acronyms such as (UWB, WLAN, IFFT, FIR, etc).

Examiner suggests applicant spell out all acronyms in the claims for clarification purposes.

b. Claim 10, line 7, applicant uses "mutlcarrier". Examiner assumes "multi-carrier".

Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 10-13 is rejected under 35 U.S.C. 101 because:

a. Claim 10 recites a "multi-carrier comprising" the claim is inoperative and therefore lacks utility. The multi-carrier signal is not either an apparatus nor a method and has no means for comprising.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. With regard to claims 14-17, claim 14 recites "same sampling frequency rate and same resolution bit". Examiner asserts that it is unclear as to what the "same" is in reference to, leading to the question "same as what?".

10. Claims 18-23 recite the limitation: Claim 18 recites:

- a. "the indoor UWB, outdoor UWB" in lines 11 and 18-19.
- b. "the no multicarrier" in line 18.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graves et al. (US Patent Application 2002/0114035) in view of Uesugi (US Patent Application 2002/0159502).

(1) With regard to claim 10, Graves et al. discloses an analog lowpass filter (Fig.

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(330)) (Pg. 4, col. 2, lines 27-34); two MUX units (Pg. 2, col. 2, lines 55-65 – Pg. 3, col. 1, lines 1-3); three commutator units (Fig. 4 (430)) and three switches (Fig. 1 (110A-M)) (Pg. 3, col. 1, lines 11-16).

Graves et al. does not explicitly disclose commutator units. However it is well known in the art that a commutator unit is a transceiver.

However Graves et al. does not disclose a multiplier and three selectable multicarrier frequencies.

However Uesugi discloses a multiplier ((Fig. 6 (412, 416)) (Pg. 4, col. 2, lines 37-38, 49-53) and three selectable multicarrier frequencies (Figs. 6 and 7 (511-514)) (Pg. 5, col. 1, lines 24-32).

Therefore it would have been obvious to one of ordinary skill in the art to modify Graves et al. in view of Uesugi to incorporate a multiplier and three selectable multicarrier frequencies in order to obtain a frequency diversity effect (Uesugi, Pg. 5, col. 1, line 35-37).

(2) With regard to claim 13, claim 13 inherits all the limitations of claim 10. Graves et al. further discloses wherein said MUX units and said switch units are programmable controllable (Pg. 1, col. 2, lines 6-26).

Allowable Subject Matter

13. Claims 1-9 are allowed.

14. The following is statement of reasons for the indication of allowable subject matter: The instant application discloses a dual-mode UWB and WLAN transceiver. Prior art references show similar methods but fail to teach: **“a switch to connect from the UWB multi-channel PN sequence mapping or the WLAN FFT and I/Q modulation to the digital lowpass-shaping filter system”**, as in claim 1.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 571-272-3047. The examiner can normally be reached on Monday – Friday, 8-5.

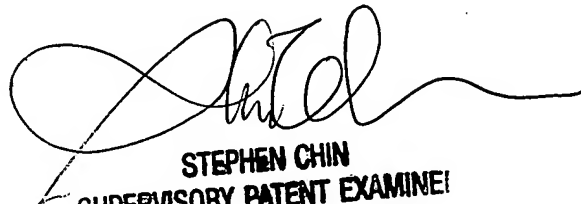
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Art Unit: 2634

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cicely Ware

cqw
September 18, 2005



STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600